

Remarks**I. Summary of Office Action**

The Office Action rejects claims 6, 12, 15-20, and 27-29 as both (1) claiming non-statutory subject matter under 35 U.S.C. § 101 and (2) being unpatentable over a combination of four references: U.S. Patent No. 6,460,036 (Herz); U.S. Patent No. 6,654,735 (Eichstaedt); U.S. Patent No. 5,821,929 (Shimizu); and U.S. Patent No. 5,724,567 (Rose).

The Office Action Summary indicates that the Action is both a Final Action and a Non-Final Action. In a telephone conversation with the undersigned representative, Examiner Joseph Avellino was made aware of the ambiguity. At that time, Examiner Avellino indicated that the action is a Non-Final Action.

**II Summary of Claimed Subject Matter**

Applicant has amended the claims as shown above. Now pending are claims 6, 12, and 15-20, and 27-29. Claims 6, 12, and 27 are independent and the rest are dependent.

The invention as claimed here is directed to a method for measuring a user's interest in a given subject. Each independent claim provides for establishing a "capped page keyword count" for each web page sent to the user by counting up all of the keywords found in the web page that are related to the given subject. The capped page keyword count is capped such that its value is not greater than a predetermined maximum number of keywords.

The capped page keyword count is then summed to establish a count of keywords that is "not greater than the count of web pages multiplied by the predetermined maximum number of keywords." Claim 29 defines the predetermined maximum number of keywords as 10.

In addition to the upper limit provided by the capping, claims 12 and 27 both provide for a lower threshold value for establishing a subject-specific page-count value S. S represents a number of web pages sent to the user that each contain at least a threshold number of keywords related to the given subject.

Independent claims 6 and 12 have been amended to include a limitation that steps of those methods are performed at a mobile-IP home agent configured to pass IP communications to a user. Mobile IP is a communications protocol that is designed to allow mobile device users to move from one network to another while maintaining their permanent IP address.

Independent claim 12 also includes limitations requiring establishment of (i) a total page count representing the number of web pages sent to a user; (ii) a subject-specific page count representing the number of web pages sent to the user that have a threshold number of keywords related to the subject and; (iii) the count of keywords related to the subject that appear in the web pages. In claim 12, these values are combined to establish a measure of the user's interest in the subject matter. Dependent claim 15 then provides that values (i)-(iii) be combined by multiplying the count of keywords (K) by the subject-specific count (S) divided by the total page count (P).  $[(K)(S)/(P)]$ .

Claims 6, 12, and 27 were also amended to clarify that the capped page keyword count is established by counting instances of keywords related to a given subject.

### III. Response to Non-Statutory Subject Matter Rejection.

The Action rejects each of the pending claims under 35 U.S.C. § 101 as claiming non-statutory subject matter. Applicant respectfully submits that the claims, as amended, fall well within the statutory standards of patentable subject matter.

Section 101 provides that any new and useful "process, machine, manufacture, or composition of matter" is eligible for patent protection. Under the USPTO's "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" an invention must produce a "useful, concrete, and tangible result," i.e., possess a certain level of "real world" value as opposed to a mere idea or concept. (The "Interim Guidelines" are available at [http://www.uspto.gov/wcb/offices/pac/dapp/opla/preognotice/guidelines101\\_20051026.pdf](http://www.uspto.gov/wcb/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf)).

A useful result is one that is specific, substantial, and credible. Here, each pending claim makes clear that its recited method has at least one specific, substantial, and credible purpose – that of measuring an Internet user's level of interest in a given subject. This purpose is realized by using a count of keywords as a basis to establish a measure of the user's interest in the given subject. As described in the specification, "[p]rovided with knowledge of a user's level of interest in one or more subjects, a service provider can better tailor services to suit the user." The transformation and creation of the Internet user's level of interest is explicitly required by the claims and thus meets the test of specific, substantial, and credible utility.

According to the Interim Guidelines, a result is "tangible" if it is not abstract. "The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing." (Interim Guidelines). Applicant respectfully asserts that the Internet user's level of interest has substantial "real world" value and practical application – and thus cannot be considered merely "abstract."

The third 101 prong is that of concrete results. Again, the phrase "concrete" should not be construed to require a physical machine or result – rather, "the process must have a result that can be substantially repeatable or the process must substantially produce the same result again." In the specification, applicant provides a number of examples of particular processes and

methods for creating the Internet user's level of interest. The express limitations provided in the claims as well as the examples discussed in the specification show that the recited method is "substantially repeatable" and thus satisfies the requirement of concreteness.

#### **IV. The Combination of References Fail to Disclose or Suggest the Recited Claim Limitations.**

Under M.P.E.P. § 2143, in order for a combination of references to render a claim obvious, the combination must disclose or suggest all of the elements of the claim. Applicant respectfully submits that because the cited combinations fail to disclose or suggest all the elements of the claims, the rejections should be withdrawn.

The following remarks specifically point out a number of failings of the references and several of the distinct features of the invention as claimed.

##### **a) The Cited References Do Not Disclose or Suggest the Claimed Use of a Mobile IP Home Agent**

Independent claims 6 and 12 have been amended to recite that steps of those methods are performed at a mobile-IP home agent configured to pass IP communications to a user. Mobile IP is a communications protocol that is designed to allow mobile device users to move from one network to another while maintaining their permanent IP address. These newly added limitations are not disclosed or suggested in the cited references and make the rejections of those claims moot.

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**b) The Cited References Do Not Disclosure or Suggest Capping a Keyword****Count at a Predetermined Maximum Number of Keywords for Each Web Page**

Each independent claim includes establishing a capped page keyword count for each web page by counting instances of keywords related to a given subject matter that. The counting is capped, however, such that the count is not greater than a predetermined number.

Of all the references cited, the Action indicates that only Shimizu disclosed the recited function of capping the count at a predetermined maximum number of keywords, and pointed to the variable N found in box S1303 of Figure 13 of Shimizu as disclosing the capping functionality. Applicant respectfully disagrees with this reading of Shimizu.

Shimizu is directed to an image processing method and apparatus that uses character recognition. Figure 13 of Shimizu shows a "detailed flow of the processing of the keyword determination processing." At step 1302, the frequencies of appearance of a number of words are checked and the results tallied. In the example provided in Column 14 of Shimizu, some words (or phrases), such as "Kannon Corporation," are found to have a frequency of 2 while other words (or phrases), such as "Iwao Daibutsu" only have a frequency of 1. "In the next step S1303, the maximum number of keywords (K) which can be set in one input image is assumed to be 5."

Shimizu provides little detail in explaining its "maximum number of keywords" (K). However, it is clear that the Shimizu maximum number K is a count of the number of different types of keywords and is *not* a maximum number of total instances (or frequency of appearance) of the keywords as required by each of the amended independent claims herein. Furthermore, Shimizu's discussion of a "maximum number of the frequency of appearance of a noun (N)" is

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not a "capped count" as claimed herein. Rather, N is simply an uncapped count as shown in the example provided in Columns 13-14 of Shimizu. In the example, N is calculated as 2 because the term with the greatest frequency appeared only twice. This calculation of N in Shimizu is not a capped count and it does not read upon that claim limitation.

Because the cited references do not disclose or suggest capping a keyword count at a predetermined maximum number of instances of keywords for each web page, Applicant submits that the references cannot obviate the independent claims as amended or their dependents.

**c) The Cited References Do Not Disclose or Suggest a Count Keyword Threshold**

Claims 12 and 27 provide for establishing a count of web pages sent to a user that each contain *at least a threshold number of keywords related to the given subject*. Beneficially, the threshold number may allow for greater specificity in identifying interest in a given subject and also may reduce server load, for instance.

The Action indicates that the Herz discussion of a threshold in its similarity measure at Col. 17, lines 10-24 would obviate the threshold claimed limitation. Applicant respectfully disagrees. The Herz similarity score measures the distance between two attribute vectors, and does not suggest the claimed "count of the number of keywords related to the given subject." Rather, the Herz threshold is a binary threshold measured as between two documents to determine whether the two documents are sufficiently matched. On the other hand, the claimed threshold focuses on each document separately and looks to a count of keywords associated with the given subject.

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Because none of the cited references disclose or suggest taking an action based on whether a web page has *at least a threshold number of keywords related to the given subject*, the references cannot obviate independent claims 12 and 27 or their dependents.

**d) The Cited References Do Not Disclose or Suggest the Claimed Method of Determining The User's Interest in a Given Subject**

Independent claim 12 provides for combining (i) a subject-specific page count value,  $S$ , that represents a number of web pages sent to the user that each contain at least a threshold number of keywords related to the given subject and (ii) a keyword count value,  $K$ , that represents a number of keywords related to the given subject that appear in web pages sent to the user. According to the claim, these values, along with a total page count,  $P$ , are used in combination to establish a measure of the user's interest level in the given subject.

Dependent claim 15 provides that these values be combined by multiplying the count of keywords associated with the subject ( $K$ ) with the subject-specific count ( $S$ ) and then divide by the total page count ( $P$ ).  $[(K)(S)/(P)]$ .

As discussed above the references do not disclose either the count of keywords related to the given subject ( $K$ ) or the number of web pages received that contain the threshold number of keywords related to the given subject ( $S$ ).

Additionally, the Action does not cite any reference or combination of references that uses the three values in combination to establish a measure of the user's interest level in the given subject. As noted previously, Herz discloses several algorithms. However, the Herz algorithms do not involve combining the three claimed measures.

Claim 15 provides a further limitation to claim 12 by reciting the specific algorithm used in the method of combining the three values: (K)(S)/(P). The Action has not cited to any reference that discloses or suggests this particular limitation. In fact, the limitation of claim 15 were not been specifically addressed by the Action.

As such, Applicant submits that the Office Action does not make-out the requisite *prima facie* case of obviousness of claim 12 or claim 15 or their dependents.

#### V. Conclusion

In view of the foregoing, Applicant submits that claims 6, 12, and 15-20 and 27-29 are now in condition for allowance, and Applicant therefore respectfully requests favorable reconsideration.

Respectfully submitted,

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Dated: August 7, 2006

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